PROPER SEWAGE DISPOSAL

Vital to Your Healthy Environment

Public Health PROTECTION

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Table of Contents

Introduction 1

A. Taking Responsibility for Safe Sewage Disposal 3

B. Investigating the Site 4

C. Choosing a Sewage Disposal System 5

D. Applying to build or install a Sewage Disposal System 6

E. Getting approval to use the Sewage Disposal System 7

F. Maintaining a Sewage Disposal System 8

G. Treating Sewage Disposal Systems after floods or earthquakes 10

Introduction

Sewage wastes can attract insects and rodents, encourage the growth of disease-causing bacteria and pollute the environment. Therefore, proper disposal of sewage wastes is an essential part of health protection and disease prevention. If you live in an area where a public sewage disposal system is not available, the responsibility for proper disposal rests with you.

The B.C. Environmental Health Officers produced this book to help you. It will make you aware of some of the important factors in planning and operating a sewage disposal system. The book includes sections on investigating your site and choosing an appropriate system. (Information and diagram sheets for individual sewage disposal systems are enclosed in the cover pocket). The book also tells you how to apply for a permit to build a disposal system and how to get approval to use it. Final sections include points on maintaining a system and treating it after floods or earthquakes.

Use this book in conjunction with advice from your local Environmental Health Officer and qualified contractors who build and maintain sewage disposal systems. Make every effort to maintain the safest system you can. You and your family will benefit directly from your efforts.

Taking Responsibility For Safe Sewage Disposal

- Ensure that all sewage is discharged into an approved sewage disposal system.
- Ask the local Environmental Health Officer for advice and information about setting up a proper sewage disposal system if a public sewer is not available.
- Ensure that sewage does not reach the surface of the land, enter bodies of fresh water, flow directly into the ground water table or contaminate water wells. In some areas, the Local Board of Health further restricts the discharge of sewage into tidal water by:
  - setting minimum distances between high water mark and any part of a sewage disposal system, and
  - banning discharges to tidal water where the sewage may endanger public health.
- Remember that it is illegal to build, install or repair a private sewage disposal system without first getting a permit from the Environmental Health Officer.

Investigating The Site

- Conduct percolation tests to determine the ability of the soil to absorb effluent. Refer to "Percolation Test Method" in the cover pocket or your information package.
- Dig observation test holes to at least 1.2 metres (4 feet) or until you encounter bedrock or hardpan. (Deeper test holes may be required in cold climates.) Note the conditions found. Leave the dirt beside the holes for inspection and cover the holes for safety.
- Determine the ground water table on your site using the test holes to measure the level at the wettest time of the year.
  - If an adjacent surface water body affects the ground water table, the elevation of the ground water table will be the elevation of the water body at its highest level.
  - If not, consider the ground water table to be the average of the two maximum seasonal ground water tables during the previous two years. Records of ground water tables are usually available at the Ministry of Environment.
  - If no records are available, and if flooding or a high water table is likely, the Environmental Health Officer may determine the ground water table.

Choosing A Sewage Disposal System

- Determine the sewage disposal system best suited to your site. For details on the location, layout and construction of each system (except for the package treatment plant), see the information and diagram sheets in the cover pocket or in your information package.
- Use a conventional system with a septic tank or a package treatment plant if your site has 1.2 metres (4 feet) of porous soil above an impervious layer of soil/bedrock or a ground water table and a slope of less than 30%. (Note: Choose only a package treatment plant that has been approved by the Ministry of Health. Contact your local health unit for details.)
- Consider using an alternate system only if the Environment Health Officer agrees that it is impossible to use a conventional system on your site. Note that the use of an alternate system depends on a variety of factors related to your site, including size, slope, frost depth and water table. Alternates include:
  - raised fields or mounds,
  - pressure distribution,
  - a residential lagoon,
  - a seepage bed,
  - extended field,
  - seepage pit, and
  - a privy:
    - a plywood pit privy or
    - a concrete vault privy,
  - holding tank under local or regional government bylaw.

Applying To Build Or Install A Sewage Disposal System

- Complete an "Application for a Permit to Construct a Sewage Disposal System," available from the Public Health Protection office.
- Be sure to include a plan showing the location of buildings, septic tanks, disposal fields (yours and your neighbours'), all drinking water sources, water lines, percolation holes and results, test holes, and surface waters.
- Note that there must be at least 30 metres (100 feet) between a water supply and a sewage disposal system.
- Return the completed application form to the nearest health unit and pay the prescribed processing fee. (There are no fees for privies or holding tanks.) The Environmental Health Officer will then inspect the site to confirm the information on the application. Once signed, the application becomes a permit to construct a sewage disposal system. The Inspector will keep one copy of the permit on file and give two to you.
- Use one copy of the permit to support your application for a building permit from your municipality or regional district. The second copy is for the use of your contractor.
- Note that the permit is not transferable and that it expires six months from the date of issue.
- Construct the sewage disposal system according to the conditions, standards and plan approved in your permit.
- Get approval from the Environmental Health Officer if you want to make any changes to the plan.
- Do not cover or operate the sewage disposal system until you have written approval from the Environmental Health Officer. (See next section.)
- Be aware that an Environmental Health Officer is not authorized to design your system for you.
- Note: Environmental Health Officers recommend that sewage disposal systems be installed by qualified sewage disposal contractors.

Getting Approval To Use The Sewage Disposal System

- Leave the entire sewage disposal system uncovered, and call the Environmental Health Officer to inspect it.
- Make the required correction if the system fails the inspection. A re-inspection fee of $100 must be paid each time the Environmental Health Officer checks to see that faults have been corrected.
- Note that every approval to use a package treatment plant requires that:
  - a copy of the approval be posted in an obvious place on or near the package treatment plant system;
  - the system be serviced and maintained in good condition; and
  - the operation of the system be continued uninterrupted.
- Note that if you make alterations or repairs in the future, you must have a permit and pay a processing fee.

Maintaining A Sewage Disposal System

- Keep a sketch showing the location of the septic tank, distribution box and disposal field in relation to a fixed point, such as your house.
- Provide suitable markings for access hatches. To prevent surface runoff from entering the tank, bury openings 30 centimetres (1 foot) below, or raise the opening 30 centimetres (1 foot) above the finished grade.

Preventing Problems

- Do not allow cars, trucks or snowmobiles to drive or park over any part of the disposal system.
- Do not plant trees with large root systems in the disposal field area.
- Ensure that there are no dripping faucets or continually running toilets that may overload the sewage disposal system with water.
- Do not use excessive amounts of bleach or other cleansers.
- Do not dump toxic chemicals, oils, paints or solvents down the toilet.
- Do not install a garburetor without increasing the size of your tank and field.
- Do not flush away cigarette butts, filters, sanitary napkins, newspaper, disposable diapers, facial tissue, paper towels, hair, plastic, metal or rubber items, coffee grounds, tea leaves, grease or fats. They can plug a septic tank or a drain field.
- Do not allow surface water, roof drains or perimeter drains to discharge into or near your sewage disposal system.
- Use water sparingly.
- Insulate the main pipe and disposal area with a thick blanket of straw during the winter. Also insulate the tank and the pipe connection from the house.
- Use snow fences to promote maximum snow cover.
- Do not leave the system non-operative for long periods during cold winter months.
- If pools of water appear on a disposal area, contact your Environmental Health Officer for advice.
- Try and spread your laundry throughout the week as opposed to doing it all in one day.

Servicing a Septic Tank

- Inspect a septic tank every year. Servicing depends mainly on the number of people using the system and the daily flow of sewage.
- Service a septic tank as often as necessary (every two to three years or when the sludge is within 45 centimetres (18 inches) from the bottom of the outlet pipe or if the scum is within 8 centimetres (3 inches) of the outlet pipe).
- Remove sludge in the spring rather than in the fall to avoid loading the septic tank with undigested solids during the cold months.
- Do not scrub a tank clean. Leave a small amount of sludge to renew bacterial activity.
- Check your phone book for listings of firms equipped to service septic tanks.

Servicing a Package Treatment Plant

- Note that the regional distributor/manufacturer must supervise the installation of each plant and provide sufficient start-up service to ensure proper performance.
- Have the package treatment plant serviced at least four times a year.
- Note that routine and emergency service can be expected from your service dealer within 24 hours of request.
- Note that if your service dealer goes out of business or is unable to fulfill the service requirement, the regional distributor must provide the necessary service until a new agent is available.

Servicing a Sewage Lagoon

- Check the water level during the rainy season and have it pumped down by a vacuum truck service if the level is too close to the top of the berm.
- Check the water level just before freeze up to make sure there is at least 45 centimetres (1.5 feet) of liquid above the inlet pipe.
- Keep grass and trees cut back around the lagoon. They shield it from wind and sunlight, impairing evaporation.
- Inspect the berm and fence yearly to ensure that the liquid stays in, and children and animals keep out.

Treating Sewage Disposal Systems After Floods Or Earthquakes

- Cover the privy pit, if the privy building has been washed away.
- Pour about 2 litres (half a gallon) of household bleach into the privy pit every three for four days - as long as any flood water remains in the pit.
- Note that flooding will usually not cause serious damage to septic tanks.
- Do not pump the septic tank out if the water table is near the surface of the ground. Hydraulic pressure may cause it to lift.
- Do not use the sewage disposal system before flood waters recede below the distribution trenches. If you do, you may damage the sewage-disposal field.
- Check with the Environmental Health Officer before using your sewage disposal system, especially if the soil has clay deposits.